ZyXEL

# Integrates Resiliency for Advanced Management of Converged Networks

- Intelligent L2/L3/L4 local switching
- Non-Blocking 384G switching performance
- Dual active-active switching fabrics
- Hot swappable I/O modules
- Built-in OSPF, VRRP
- Up to 192 Full powered GbE PoE ports
- 16K layer 2 MAC addresses table
- 8K IP address table
- 64K routing path
- Support 2MB packet buffer

Modular Switch

MS-7206

## Benefits

### Unbeatable Performance and Scalability

Implement campus and building backbone networks supporting thousands of users

**Superior System Performance**

- Non-blocking 384 Gbps switching capacity

**Scale Port Density**

- 192 Gigabit Ports per system
- High flexibility—mixed GbE copper, fiber and PoE types

**Scalable Protocols**

- Advance OSPF scales to support larger network

### High Availability & Resiliency

Less-downtime to maximize productivity

**Fault-free with Automatic Recovery**

- OSPF ensures rapid determination of best routes (convergence), avoid routing loops
- Rapid Spanning Tree provides Layer 2 resilience and prevent loops
- VRRP ensures hosts (PCs) have uninterrupted service from default gateway

**Full Redundancy**

- Dual, Load-sharing Switch Fabrics
- Power Supplies (1+1)

**Full Hot-swap Capability**

- Fabric, Modules, Power, Fans

### Secured Connectivity

**Security from the Core to the Edge**

- 4-tier security (L1~L4)
- Sophisticated Layer 2 to Layer 4 ACL (Access Control List), making security policy to be applied at LAN easily.
- 802.1x network login, unified authentication platform over wired and wireless network

### Guarantees quality of service for different applications

- Bandwidth Guarantee with WFQ
- Policy-based QoS for different applications
- Intelligent L2-L4 ACL for traffic classification
- Fast IP multicast to the edge (DVMRP L3+ multicasting, IGMP…)
- 8 priority queues per port

### Low Total Cost of Ownership

**No Hidden Extra Cost**

- Easy to order Starter Kits include shelf, power supply, switch fabric, fan,48G module OSPF, VRRP

**Future-Proof Architecture**

- Hardware architecture preserved bandwidth for the growth of tomorrow Up-to-date designs (Gigabit, PoE, 10G Ethernet)

**Low Switching Cost**

- Advance & completed interoperability features
- Cisco like CLI, low switching cost

**Investment Protection**

- Supports Voice / Data multi-service network

## Specifications

### System Compliance

- IEEE 802.3 10BASE-T Ethernet
- IEEE 802.3u 100BASE-TX Ethernet
- IEEE 802.ab 1000BASE-T Ethernet
- IEEE 802.3z
- IEEE 802.3x Flow control
- IEEE 802.1D Spanning tree protocol
- IEEE 802.1w Rapid Spanning tree protocol
- IEEE 802.1s Multiple Spanning tree protocol
- IEEE 802.1p Class of service, priority protocols
- IEEE 802.1Q VLAN tagging
- IEEE 802.1x Port Authentication
- IEEE 802.3ad LACP aggregation

### Performance

- Max. 384 Gbps non-blocking switching fabric
- Switching Forwarding Rate 286 Mpps (1488000 pps/1000BASE-T/1000BASE-X, 148800 pps/100BASE-TX)

### Traffic Management and QoS

- Rule/port-based Rate Limiting, 64 kbps granularity
- Dual-Rate-Three-Color
- CIR/PIR for bandwidth control
- Port-based egress traffic shaping
- Broadcast Storm Control
- IEEE 802.1p with 8 priority queues per port
- SPQ/WRR/WFQ scheduling algorithm
- DSCP
- DSCP to 802.1p priority mapping
- IGMP/IGMP snooping v1, v2 & v3
- MVR

### IP Routing

- 64 IP routing domains
- 8 K IP address table
- Wire-speed IP forwarding
- RIP v1, v2
- Static Routing
- OSPF v2

### Link Aggregation

- IEEE 802.3ad LACP link aggregation
- Up to 6 aggregation groups, 8 ports/per group randomly selected

### Resilient Network

- IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)
- IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)

### Security

- Intrusion Lock
- MAC Freeze
- MAC filtering
- Port Security
- Limited MAC number per port
- 802.1x port-based authentication
- SSH v1/v2
- SSL

### Network Management

- ZyXEL iStacking™, up to 24 switches managed by single IP address
- Web-based management
- Telnet CLI
- SNMP v1, v2c
- RS-232c Local console
- static IP or DHCP client
- RMON four RMON groups 1, 2, 3, 9 (history, statistics, alarms, and events)
- Port mirroring

### Intelligent ACL (L2/L3/L4 Access List Control)

- Based on MAC address
- Based on VLAN
- Based on IP address
- Based on Protocol type
- Based on TCP/UDP type
- Based on DSCP

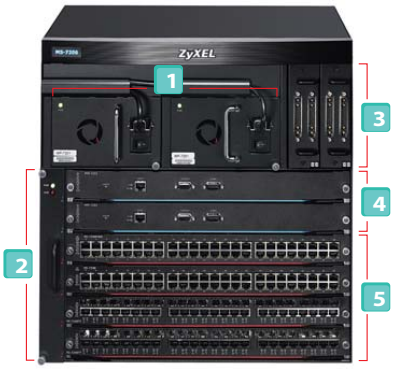
## Hardware Specification

- Support of auto-negotiation
- Support of auto MDI/MDI-X

## Component List

- System: MS-7206
- Switch Fabric: MM-7201
- IO Module:
  - MI-7248 (48 1000T)
  - MI-7248PWR (48 1000T PoE)
  - MI-7248TF (24 1000T + 24 SFP)
  - MI-7308 (8 XFP)
- Accessory:
  - MP-7201 (600 W Power supply module)
  - MP-7202 (750 W external power box for PoE)
  - MF-7201 (Fan Module)

## A Quick Look at MS-7206




1. Dual Redundancy Power Supplies
2. Removable FAN
3. Up to 4 external PoE power units to supply MI-7248PWR
4. Dual Switch Fabrics & Mgmt. slot
5. Four I/O Modules

**MM-7201**

- 192 Gbps switch fabric
- Load sharing and non-blocking performance
- CLI, SNMP, RMON
- Out-of-band management
- One 10/100BASE-TX management port
- Two series port: RS-232 console & Alarm console
- System status LEDs

**MI-7248**

- 48-port Gigabit copper I/O module
- L2/L3/L4 local switching support
- High density Gigabit copper aggregation

**MI-7248PWR**

- 48-port Gigabit copper with PoE I/O module
- L2/L3/L4 local switching support
- High density PoE aggregation at full power

**MI-7248TF**

- 48-port Gigabit I/O module
- 24-port 1000BASE-T + 24 SFP slots
- L2/L3/L4 local switching support
- 24 SFP slots for fiber connectivity
- High flexible design for high density environment

**MP-7201**

- 600 W PSU for MS-7206 system
- Dual active/active load sharing design

**MP-7202**

- 750 W external PSU to provide full 48-port PoE power for a MI-7248PWR
- Isolated PoE & System power to increase system stability

## Power Requirements

- Input voltage of AC: 100-240 VAC, 50/60 Hz
- Max power rating of AC: 600 Watt

## Physical Specifications

- Dimensions: 435 (W) x 315.5 (D) x 447.2 (H) mm
- Weight: 15.5 Kg

## Environmental Specifications

- Operating temperature: 0°C ~ 45°C
- Storage temperature: - 25°C ~ 70°C
- Operating humidity: 10% ~ 90%, (non-condensing)

## Certification

- UL 60950-1
- CSA 60950-1
- EN 60950-1
- IEC 60950-1

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